

TELLUREX

C O R P O R A T I O N

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TELLUREX
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Clyde E. McKenzie

Chairman & Chief Executive Officer
Tellurex Corporation

Mr. McKenzie formed and led an investor group that made the acquisition of Tellurex from predecessor ownership in March of 2005. MC-L Holdings LLC and Charles J. Cauchy, an original co-founder of the company and presently its President and Chief Operating Officer, closed the acquisition. Subsequently, MC-L and other insiders to the due diligence for the acquisition invested \$400,000 to stabilize the company and bring all of its accounts current. In the summer of 2005, Mr. McKenzie structured and closed a \$2,240,000 Tellurex capital raise. In 2006, Tellurex competed for and won \$1,263,950 in investment from the State of Michigan's 21st Century Jobs Fund. As of this writing in February of 2007, Tellurex is raising \$2,000,000 in common equity from existing and new investors to further underwrite its accelerating growth.

Mr. McKenzie is co-founder with Barry Curtiss-Lusher of McKenzie Curtiss-Lusher & Associates LLC and MC-L Holdings LLC. The first entity is a consultancy working with privately owned businesses in the areas of valuation, due diligence and strategic planning. The latter entity owns interests in businesses and tangible assets.

He joined Mr. Curtiss-Lusher and a third partner as a co-owner of Strategic Asset Management in September 2000. SAM is the founder, operator and the largest owner of Nexus Resources LLC (and its affiliates), an oil and gas exploration and production company active in Cameron Parish, Louisiana and Comanche County, Kansas. Mr. McKenzie is Chief Financial Officer and a director of Nexus. He was an executive in various capacities in banking, oil and gas exploration and production and in the natural gas pipeline and services industries for over 25 years.

From 1974 through 1987, Mr. McKenzie was a commercial banker in Colorado and in Michigan. His last assignments in banking were as Senior Vice President and manager of the energy-lending group for First Interstate Bank of Denver (now a Wells Fargo bank) and as a member of the bank's Senior Loan Committee. From 1987 through 1995, he served first as Vice President of Business Development and subsequently as Vice President and Treasurer reporting to the chairman of Apache Corporation, one of the largest of the independent energy companies that explores for, develops and produces oil and natural gas world wide (NYSE: APA). Mr. McKenzie was Chief Financial Officer of KN Energy, Inc., an integrated energy services provider, from 1995 until mid-1999, when KN acquired Kinder Morgan, Inc. (NYSE: KMI). He has served on the Board of Directors of Tom Brown, Inc., a Midland, Texas, NYSE-traded oil and gas exploration and production company (since acquired by Encana), and on the boards of a variety of energy industry and community organizations. Currently, he serves on the regional board of the Anti-Defamation League in the Rocky Mountain States and on the Advisory Board of the Samuel Zell & Robert H. Lurie Institute for Entrepreneurial Studies at the University of Michigan's Ross School of Business.

Mr. McKenzie holds Bachelors and Masters Degrees in Business Administration from the University of Michigan where he and his wife maintain a scholarship for in-state undergraduate students in financial need.

The introduction of the Tellurex Z-Max® module raised the bar for performance efficiency in thermoelectric technology.



Taking Thermoelectric Technology to the Next Level

If you are considering thermoelectric technology for an application, there are two major factors that will determine the success of your product: *performance* and *reliability*.

Performance

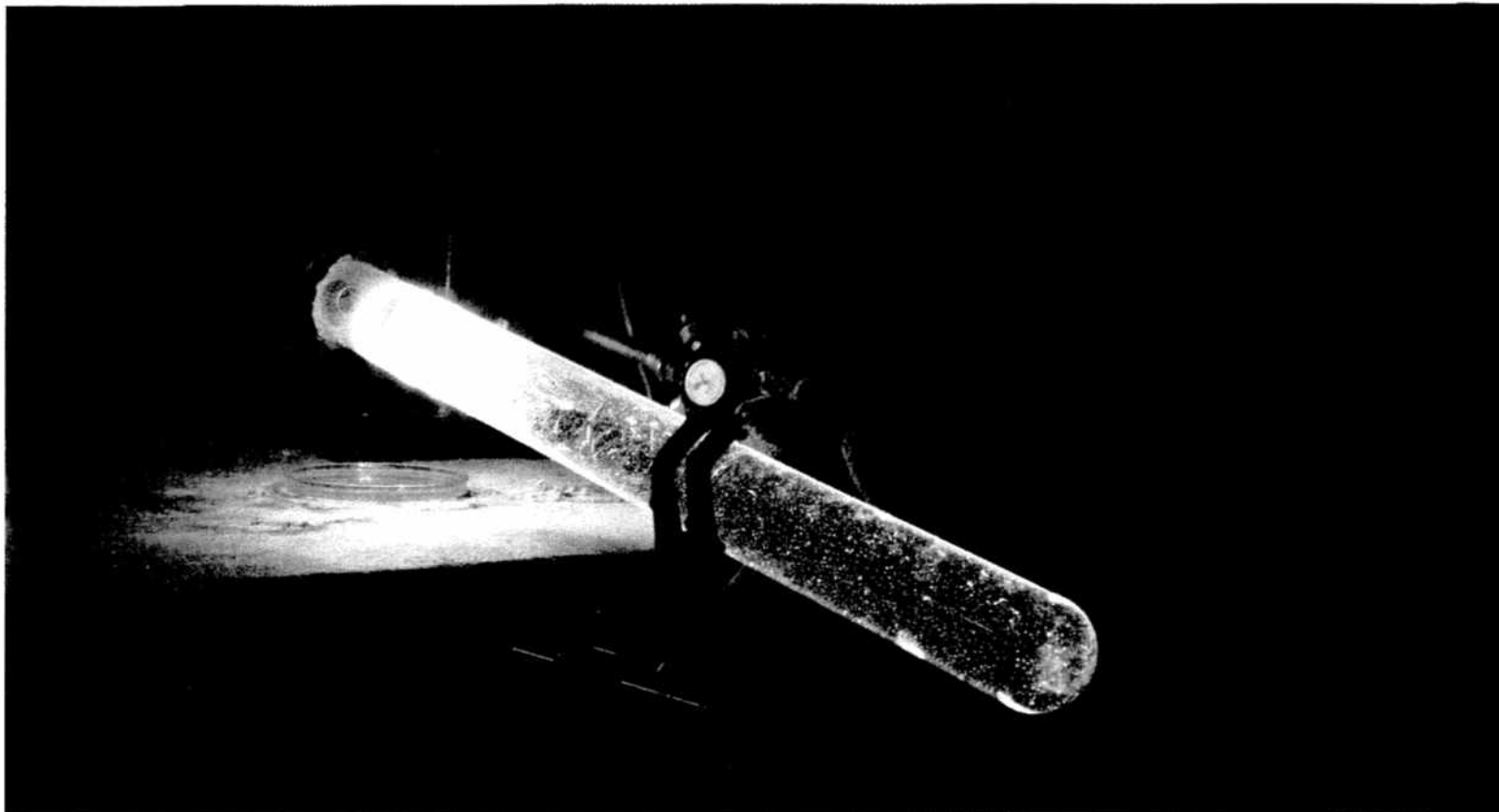
Optimum performance starts with the heart of the system, the module. The combination of both material science and manufacturing process determines the ultimate performance level of a thermoelectric module. All manufacturers begin with the same basic material, bismuth telluride; but it is beyond that elementary level that the

magic begins. A variety of additional alloys can be combined with bismuth telluride to create superior semiconductor materials.

At Tellurex, the super-efficient performance level of the Z-Max module is the result of an optimized combination of patented materials and proprietary manufacturing methods that produce robust, efficient performance levels (depicted in Figure 1).

Reliability

Robust Tellurex Z-Max modules are the result of a manufacturing process called "press and sintering." This patented Tellurex process adds structural integrity and durability to



our raw thermoelectric pellet material. The enhanced hardness of the finished material enables Z-Max modules to withstand harsh environments and remain reliable, day after day, year after year.

The Advantage

These factors combine to give the Z-Max module a performance advantage over our competition. Our patented materials and manufacturing process are the basis of unmatched thermoelectric power and reliability that can endure the most challenging operating conditions. We are always working to further improve our materials and to solidify and expand our competitive advantage.

Ensure the success of your new product initiative. Specify Tellurex Z-Max® modules.

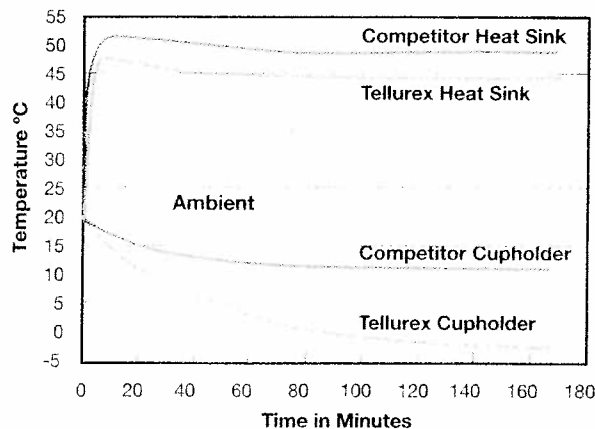
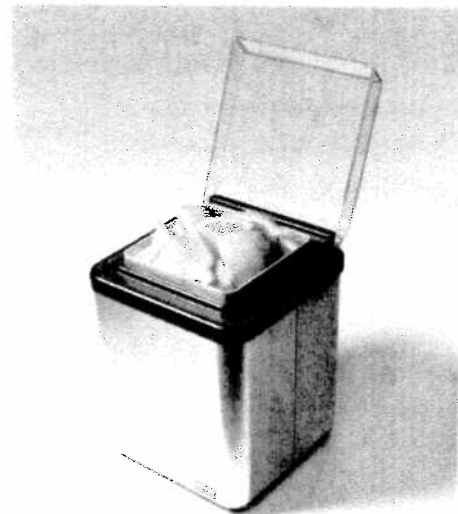
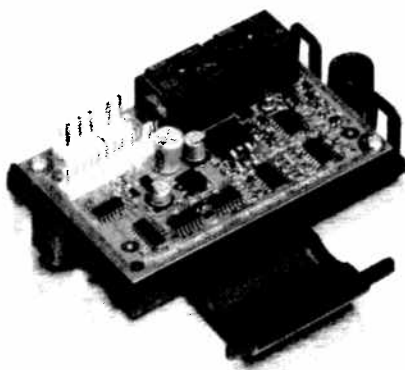
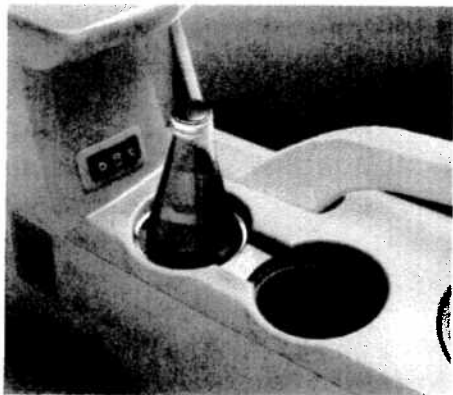


Figure 1 This graph illustrates the results of a test to benchmark automotive thermoelectric cupholders. The purpose was to develop an objective and repeatable test to measure the true thermoelectric performance of different devices. When compared to the competition the Tellurex Z-Max module is able to provide a greater level of cooling performance.

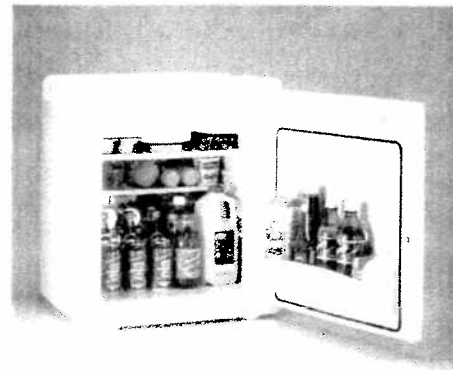


Great Engineering for Great Thermoelectrics

When you choose Z-Max thermoelectrics as the engine of your new cooling/heating or power generation project, you will want to incorporate proper engineering around it to ensure success. Experience has taught us that great thermoelectric projects reach their fullest potential only when proper system design and development is wrapped around a superior module. Once you have chosen the finest thermoelectric module, we invite you to challenge our staff to help you engineer an optimized thermoelectric system.

When Tellurex engineers a custom solution, we provide maximum system performance with our eyes sharply focused on cost, materials availability, package size and reliability. With over 20 years of thermoelectric engineering background, we can enhance your development or simply provide temperature control electronics suitable for your application.

After clarification of the project (we commonly sign Non-Disclosure Agreements to protect intellectual property) Tellurex will provide you with engineering cost estimates for anything from basic system engineering to a total product solution. Tellurex can



Imagination to Innovation

also provide a full turn-key concept-to-shipped-product solution if you want to take advantage of our relationships with the best suppliers.

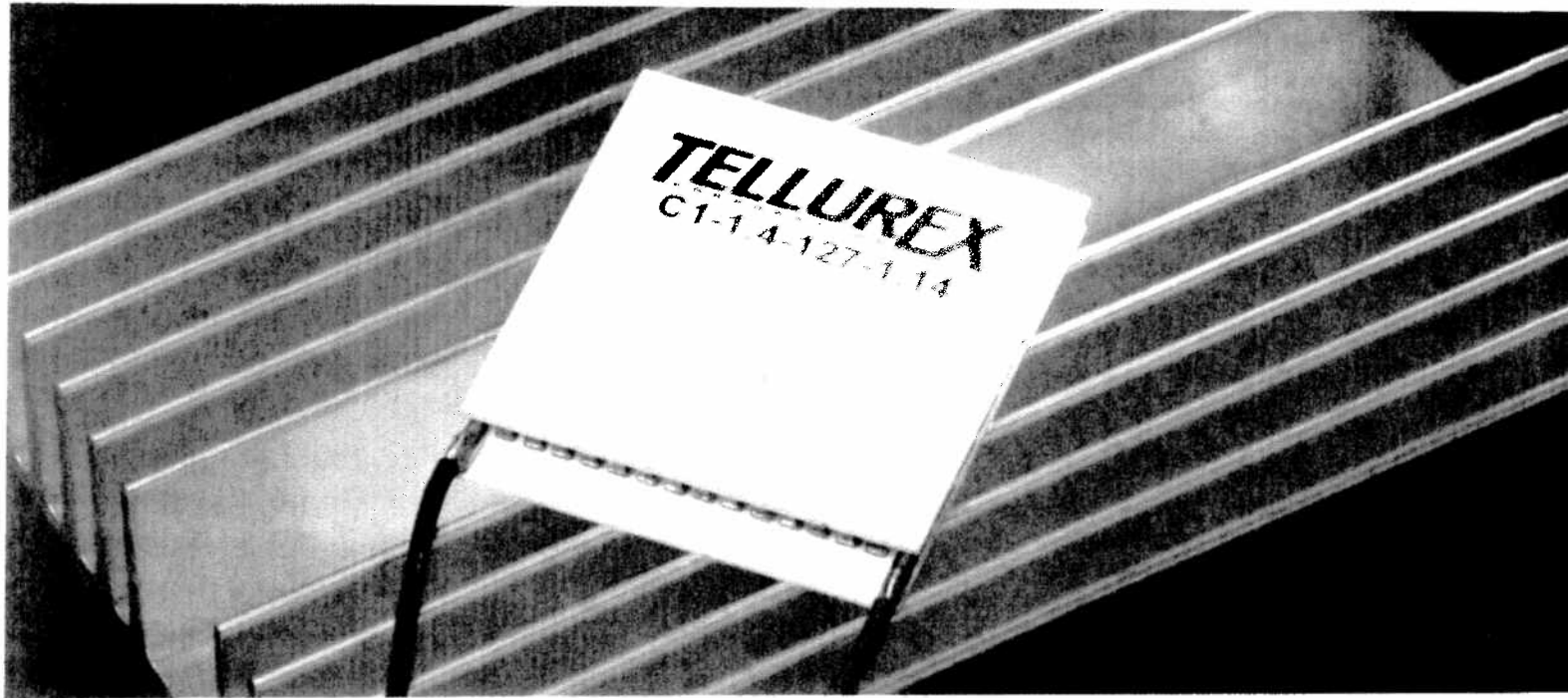
Tellurex has developed a diverse group of products and projects in many different markets and for the U.S. military. From concept to finished product, we have collaborated in the design and engineering of projects from consumer products, to medical devices, to full missile guidance test systems.

Whether you employ your own design expertise or engage Tellurex for help in product development, we enjoy seeing applications that are well

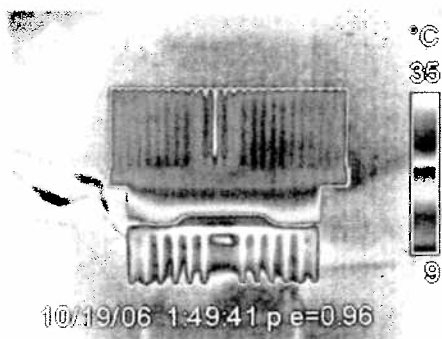
The sooner Tellurex is involved in your product development process, the faster your product can get to market, and the better it will perform when it gets there.

engineered and use Z-Max modules at their highest possible level of performance. We invite you to visit our web site at www.tellurex.com to learn more about the Z-Max advantage.

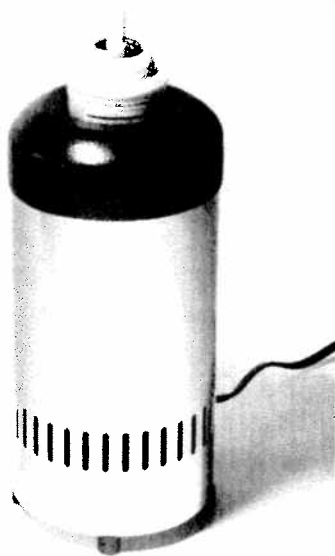
To discuss engineered solutions, system engineering, or if you would like some friendly design tips, contact Tellurex at sales@tellurex.com.



Thermoelectric Cooling



Thermal image of a cooling engine.



How a Cooling Module Works:

The flow of heat in a thermoelectric device is very similar to the way that traditional compressed refrigerant transfers heat in a mechanical system. The circulating fluids in the compressor system carry heat from the thermal load to a heat sink where the heat can be dissipated. With thermoelectric technology, on the other hand, the circulating direct current (DC) carries heat from the thermal load to a heat sink which can effectively discharge the heat into the outside environment.

Each individual thermoelectric system design will have a unique capacity for pumping heat (in Watts or BTU/hour), and this will be influenced by many factors. The most important variables are ambient temperature; physical, electrical, and performance characteristics of the thermoelectric modules employed; the efficiency of

the heat dissipation system (i.e., the heat sink and fan); and the amount of heat transfer required. Typical thermoelectric applications will pump heat loads ranging from several milliwatts to hundreds of watts.

Thermoelectric Cooling Benefits

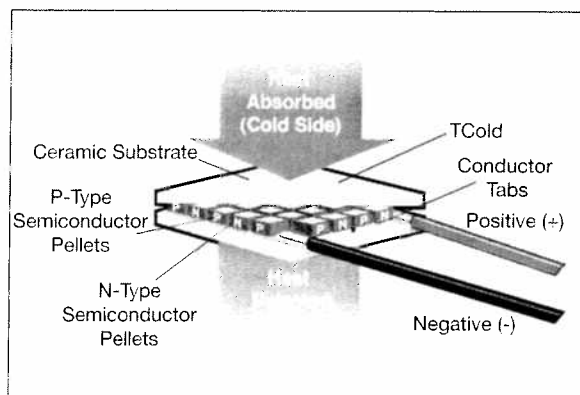
Choices among cooling technologies depend on the unique requirements of any given application. However, thermoelectric coolers offer several distinct advantages over other technologies:

- Thermoelectric coolers have no moving parts and, therefore, need virtually no maintenance.
- Life-testing indicates the capability of Tellurex modules to exceed 100,000 hours of steady-state operation.
- Thermoelectric coolers contain no chlorofluorocarbons or other

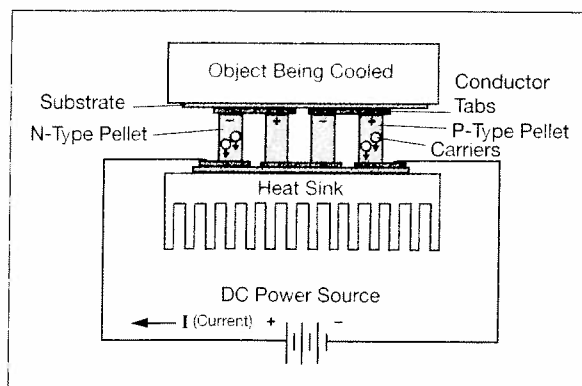
Thermoelectrics allow for cooling or freezing in areas of limited space where conventional cooling methods would be difficult or impossible.

materials which may require periodic replenishment.

- Temperature control to within fractions of a degree can be maintained using thermoelectric devices with appropriate support circuitry.
- Modules can function in environments that are too severe, too sensitive, or too small for conventional refrigeration.
- Thermoelectric coolers are not position or orientation dependent.
- The direction of heat pumping in a system is fully reversible. Changing the polarity of the DC power supply causes heat to be pumped in the opposite direction; the hot side of a Z-Max module becomes cold and the cold side becomes hot. A cooler can become a heater with no physical movement of the whole device or any part of it.



Thermoelectric modules are essentially solid-state heat pumps that consist of a combination of dissimilar metals that are “doped” so they can carry either a Positive or Negative charge. The pellets are configured so that they are connected electrically in series, but thermally in parallel.



Metallized ceramic substrates provide the platform for the pellets and the small conductive tabs that connect them. By connecting a heat sink and fan to the module's Hot Side, the volume of cooling can be optimized and controlled. With a properly “tuned” controller, it is possible to maintain systems well within 0.1° C of a set point.

Tellurex allows product designers an entirely new platform for creative thinking, expanding the possibilities for elegant thermoelectric solutions beyond existing parameters.

How Does This Technology Work?

The basis of thermoelectric power generation was discovered by Thomas Seebeck. In 1821, Seebeck discovered that heat applied to certain materials causes a voltage potential to develop. The ability of two dissimilar conductors to produce a voltage when a temperature difference is applied is known as the Seebeck effect. The voltage which results is referred to as Seebeck voltage.

Thermoelectric power generation devices typically use special semiconductor materials which are optimized for the Seebeck effect. The circuit shown in Figure 1 demonstrates the simplest possible example. It shows a pair of semiconductor pellets and the relevant

flow of thermal energy and electrical energy which results. As the heat moves from the hot to the cold side of the pellet, the charge carriers (i.e., electrons and electron holes) are carried with the heat.

As reflected in Figure 1, it is through the use of both N and P type materials that we can truly optimize power generation using the Seebeck effect. N and P pellets are configured thermally in parallel, but electrically in a series circuit. In truly practical systems, (Figure 2) many such N and P couples are employed to bring the Seebeck voltage up to useful levels. A more rigorous description of how this technology works is available in the design manual section of our web site, www.tellurex.com.

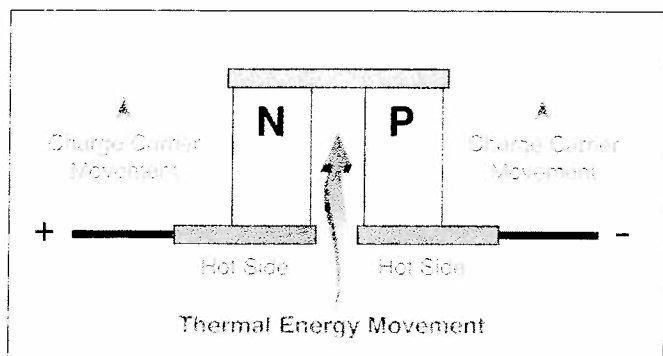


Figure 1 Type N and P pellets are configured thermally in parallel, but electrically in a series circuit.

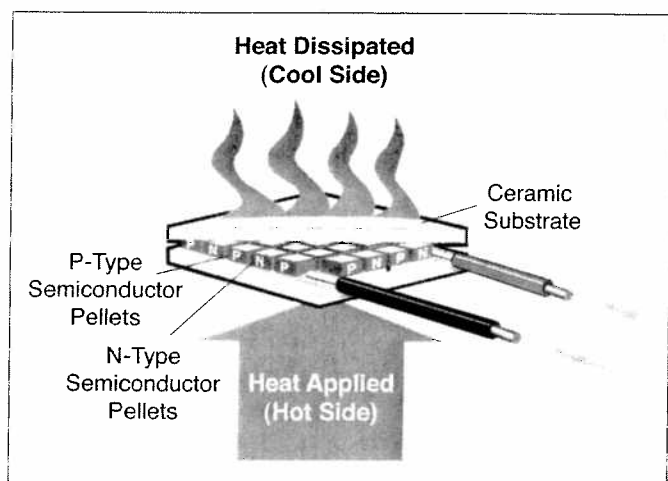


Figure 2 The N and P pellets are arranged in rows and bonded to ceramic substrate material with high temperature solder.

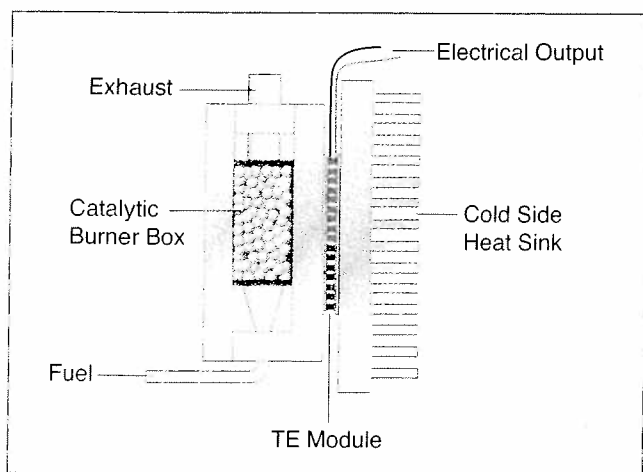
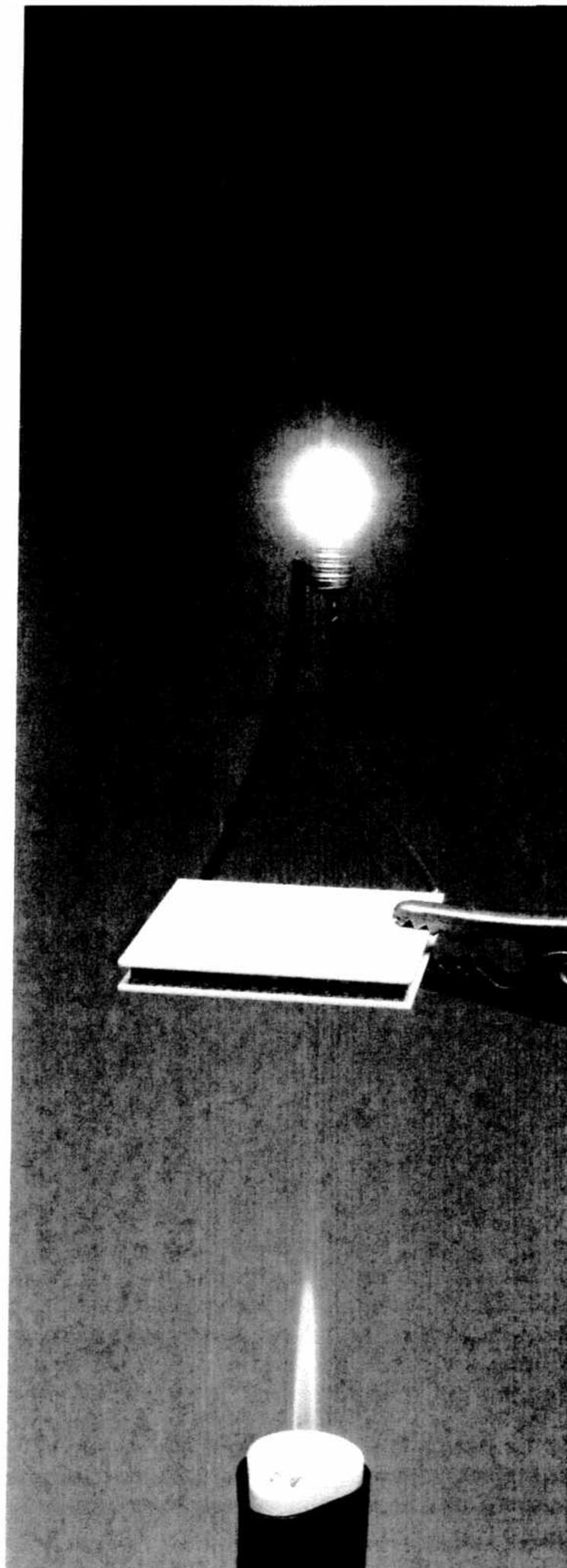


Figure 3 Fundamentally, in a power generation system there are four basic components: a heat source, a thermoelectric power generator, a "cold-side" heat sink, and the electrical load. The system may also include a voltage regulation circuit, or a fan for the heat sink.



The superior performance of Tellurex modules continues to expand the universe of thermoelectric product applications.



With its patented techniques, Tellurex produces thermoelectric modules that deliver extremely efficient solid state heat-pumping for both cooling and heating. Tellurex also leads the world in the development and manufacture of systems that generate DC power from a variety of heat sources. Due to technological breakthroughs in material science and our years of practical experience in thermoelectric engineering, Tellurex is called upon to design and develop innovative uses for thermoelectric technology every day.

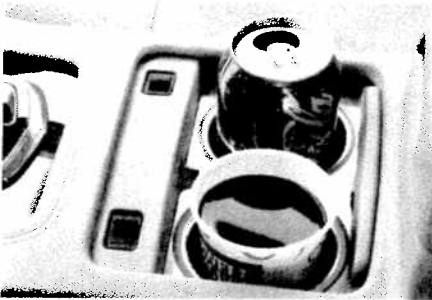
Tellurex has led thermoelectric development in industries over the years:

- Tellurex was selected to help design and develop the first mass-produced thermoelectric refrigerator manufactured in the United States. Our selection was based on three factors: the performance output

of the Z-Max module, Tellurex's abilities to optimize the final engineering of the thermoelectric subassembly, and the capability to manufacture the devices in high volumes. Our customer required a 40° F Delta T in a 2.2 cubic foot interior space in order to put a viable product in the marketplace. With Tellurex expertise, the final product easily exceeded those requirements.

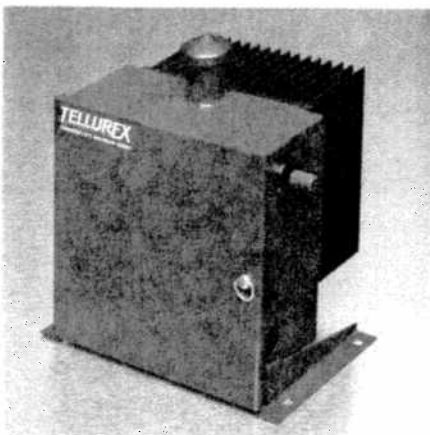
- The U.S. military had been searching for a thermoelectric company that could design, develop and build a missile guidance system tester capable of achieving 500 watts, a high ramp rate and high heat load (acceleration from runway level to sub-space altitudes). Tellurex created an innovative solution that successfully achieved those challenging objectives.

U.S. automotive manufacturers want innovative convenience products that deliver a “wow” factor in their newly designed vehicles. The Thermoelectric Cupholder Module (TCM) is an ideal answer and is already in the marketplace. Electric power generation from waste heat is another application on our horizon for motor vehicles.

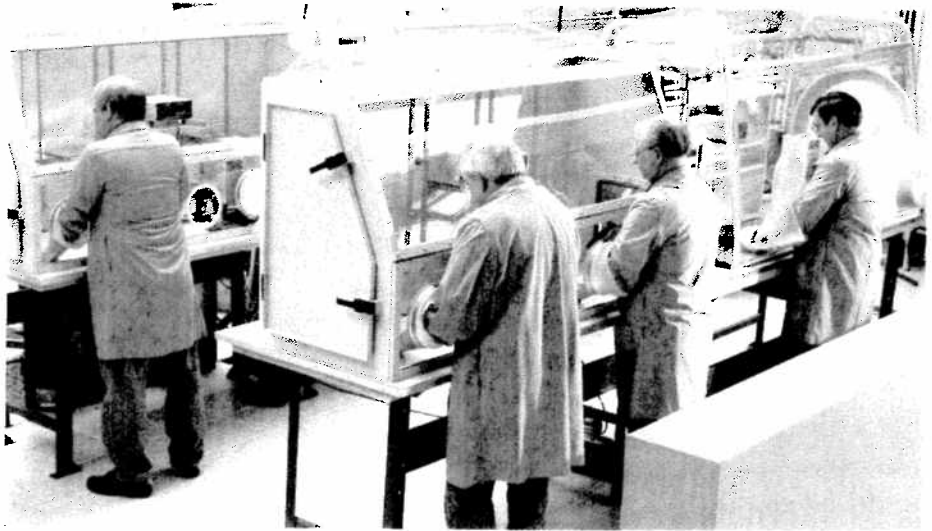


Dual Thermoelectric Cupholder Module (TCM).

Tellurex's expertise in small power generation applications led to the design of an insect eradication appliance that can function in remote locations without conventional power sources. This required the engineering of both a catalytic combustion system and a custom Z-Max module that could generate



Small remote power generation system.



Isolated clean environment for thermoelectric development.

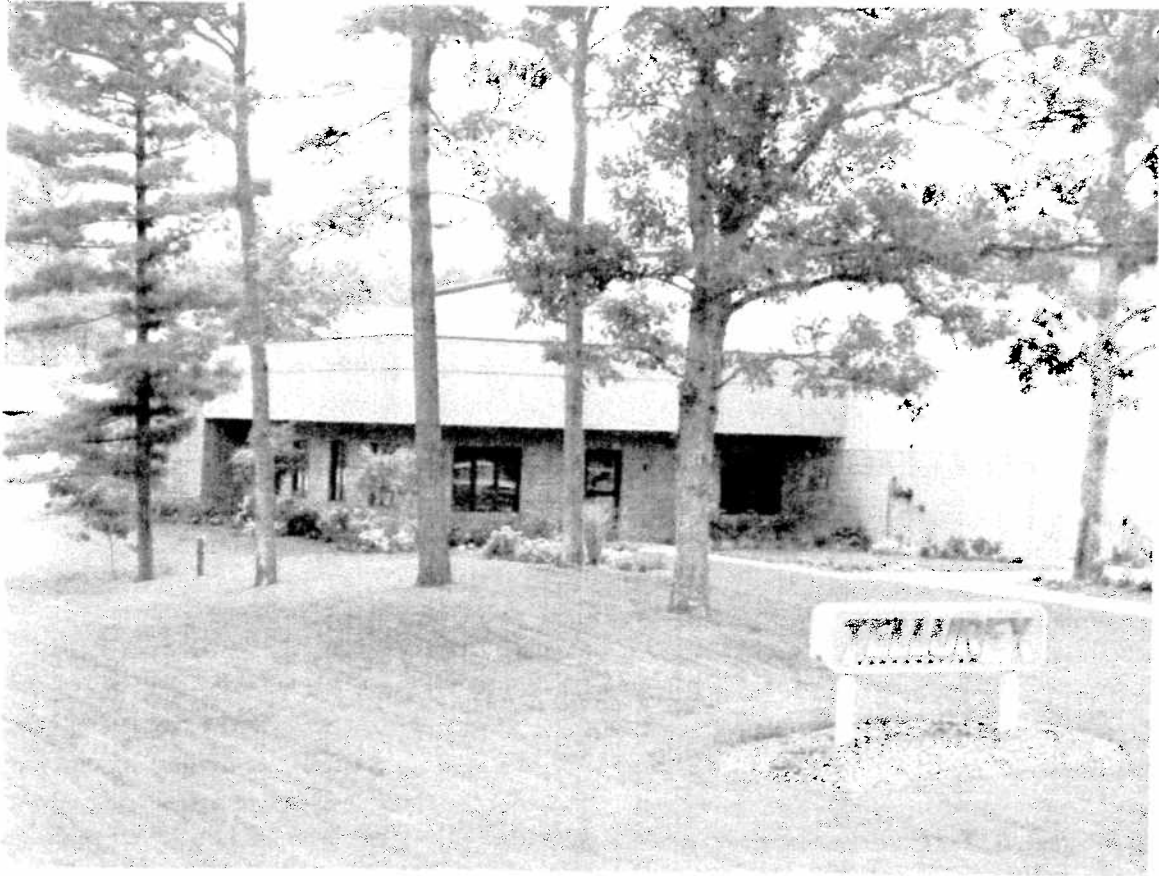
electricity from propane combustion while withstanding extreme environments and temperature swings.

A medical device manufacturer needed a system that could maintain precise and reliable temperature control of material in a testing environment. Vibration and noise levels had eliminated conventional refrigeration as a possibility. Thermoelectrics were the perfect solution in this situation, but performance and reliability were critical to ensuring 100% accuracy of test results. With the capability to maintain a $\pm 0.1^{\circ}\text{C}$ set point, the Z-Max module consistently provides both.

A commercial food service appliance manufacturer needed to develop an appliance that can keep countertop

food safe for human consumption for long periods of time. They required a compact cooling system capable of achieving and holding low temperatures, even in very warm environments. The Tellurex team provided a design and subassembly for this manufacturer that exceeded their expectations. The unit maintains liquids and food products at temperatures just above freezing in above-normal ambient conditions.

Today, Tellurex continues to lead the way in thermoelectric technology. A partnership of universities, the Department of Naval Research, and Tellurex is developing super-efficient nanomaterials for thermoelectric applications. Stay tuned.



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